

# How to Read a CASA Summary Report: *Just for Starters*

## Introduction

### What is CASA?

The Clinic Assessment Software Application, CASA, is a menu-driven relational database developed by the National Immunization Program, Centers for Disease Control and Prevention (CDC), as an assessment tool for immunization clinics and providers. CASA is used for the data entry and analysis components of a practice-based vaccination assessment. It includes reminder and recall tracking capabilities, as well as many other special features. A CASA assessment can help providers understand their current vaccination coverage levels and diagnose their immunization delivery system problems. CASA provides an extensive body of data that can be accessed and organized to suit individual practice needs.



*“Just for Starters”* is an introduction to reading the CASA Summary Report. More in-depth materials and training are available from the CDC National Immunization Program.

NOTE WELL: The information in *“Just for Starters”* refers only to the CASA Summary Report, NOT to the CASA Diagnostic Report. A copy of a CASA Summary Report is attached.

CASA is constantly evolving. Definitions, vaccine-specific age criteria, and diagnostic capabilities are continuously being updated to reflect changing ACIP recommendations and user needs. This is not the last word.

## Important Abbreviations and Definitions

### Vaccines

<b>DTP</b>	In CASA reports, there is no distinction between DTP, DTaP, and DT
<b>Polio</b>	In CASA reports, there is no distinction between OPV and IPV.
<b>Hib</b>	In CASA reports, there is no distinction between Hib brands.

Though the CASA analyses do not distinguish among the various types, the specific types of vaccine (e.g., IPV vs. OPV, Hib brands) can be entered into CASA.

### **MOGE** (pronounced *moe-ghee*)

Moved Or Going Elsewhere, i.e., there is documentation that the person has moved out of the jurisdiction or is going elsewhere for services. Documentation of at least one of the following is required:

- Copies of the child’s records were transferred to a new practice.
- A letter was received from another provider that the patient is in a new practice.
- A mailed reminder card/letter was returned by the post office with no forwarding address.
- The parent/guardian informed the practice of the intent to transfer the child’s care to another primary care provider during a previous office visit, home visit, or telephone contact.

### **Date of Assessment**

**Assessment Date:** the date the assessment was conducted

**Common Assessment Date:** When doing assessments for a *group* of practices, each practice has its own assessment date. However, when comparing the vaccination levels at the sites, one review date must be used for all sites — for fairness' sake. That somewhat arbitrarily chosen, single point in time is called the Common Assessment Date.

When conducting an assessment for one clinic/provider only, the Assessment Date and the Common Assessment Date are identical. The Common Assessment Date is what appears on the CASA Summary Report.

### Up-To-Date (UTD)

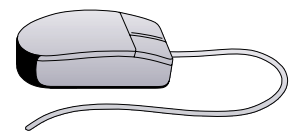
UTD means “fully vaccinated for age.” The number of doses of each vaccine that a child needs can be customized by the CASA user to reflect any criteria at any age. As a default, children are considered UTD if they have received the following number of vaccines by the ages shown. Please note that only the ages at which criteria change are shown. For example, the default criteria are the same at 12 months as they are at 7 months, the same at 18 months as at 16 months.

Age (in months)	Vaccine				
	<i>DTP</i>	<i>Polio</i>	<i>Hib</i>	<i>Hep B</i>	<i>MMR</i>
3	1	1	1	1	
5	2	2	2	2	
7	3	2	2	2	
16	4	3	3	3	1
24*	4	3	3	3	1

\*criteria same as 16 months

UTD has two subsets:

- (1) **UTD** at the benchmark ages (either 12 mos or 24 mos)
- (2) **Late UTD** — i.e., UTD at the time of the CASA assessment, but not at the benchmark age



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### Missed Opportunities (or Non-Simultaneous Vaccination)

Failure to give all needed vaccines simultaneously on the *last vaccination visit*. (There is a special CASA option that allows you to enter non-vaccination visits. Discussion of this option is beyond the scope of this introduction.)

### “Lost” or “Lost to Follow-Up”

Eligible for vaccine, but not seen in the past 12 months

### Not Eligible for Vaccine

Not eligible at 24 months because of minimum intervals needed between vaccine doses

### **Late Start Rates**

Failure to begin office-based immunization by 3 months of age.

Late Start rate is calculated as the % of infants who do not have one DTP or polio or Hib vaccine by 3 months of age. The Hepatitis B vaccine given at birth is not counted.

### **Drop-Off Rates**

The drop-off rate measures a sharp decline in DTP status from one age cohort to another.

The Drop-Off Rate is calculated as:

At 24 mos of age = % with DTP1 at 6 mos *minus* % with DTP4 at 24 mos

At 12 mos of age = % with DTP1 at 6 mos *minus* % with DTP3 at 12 mos

## **CASA Reports Immunization Levels in Several Ways**

Please refer to the attached CASA Summary Report.

### **Not Up-To-Date:**

This can be found on the flow chart after the second branching. As the words imply, this tells how many children in the cohort were missing one or more shots at the time of the assessment. The goal is to have 10% or less Not Up-To-Date.

### **UTD Grid and UTD Percentages Graph:**

On WINCASA reports, these can be found on the pages after the flow chart.

The **UTD Grid** shows the % of children who were UTD for all needed vaccines by age.

The number of each vaccine needed to be considered Up-To-Date is included in the grid.

The “% Coverage” column shows the age-specific immunization levels.

The **UTD Percentages Graph** shows the same data in a graphic format.

### **UTD by vaccine dose:**

CASA also reports the age-specific immunization levels for each specific dose of each vaccine (e.g., DTP4).

## **CASA Helps Pinpoint Specific Problems**

CASA provides detailed reports on the specific diagnosis of the problem, for example, whether record-keeping and documentation are adequate, whether children start their series on time, whether and when patients drop out of the system, whether recall is used effectively, whether vaccines are given simultaneously. It can also be used to identify specific vaccines (e.g., MMR) or specific doses of vaccines (e.g., DTP4) that are a problem for the practice. This important diagnostic capability of CASA facilitates a focused — rather than a “laundry list” — approach to change at the site.

Although CASA can be used for adolescent and adult practices, the diagnostics capabilities are currently limited for these groups. Efforts to expand CASA for these groups are underway.

### **Moved Or Going Elsewhere (MOGE)**

This can be found on the flow chart after the first branching. Take the MOGE number shown and divide it by the number of records reviewed (the very top of the flow chart).

If this is much *less* than 15% for a 24-month-old cohort, a question arises about the possibility of poor documentation. Other explanations (e.g., early archiving) are also possible — ask about these. Usually, a *low* % MOGE will be accompanied by a *high* % of children who are eligible for vaccine, but not seen in the past 12 months (i.e., “Lost” or “Lost to Follow-up”). Note that CASA does not include “MOGE” records in its analyses.

### **% Missed Opportunities (or Non-Simultaneous Vaccination)**

This can be found on the flow chart after the third branching. If this is more than 5%, we ask why there was a failure to give all needed vaccines simultaneously on the previous vaccination visit. Good questions include:

- Is there an office **policy against**:
  - simultaneous administration?
  - any particular vaccine (e.g., MMR or DTP4)?
  - vaccinating at the earliest time (e.g., MMR or DTP4 at 12 mos)?
- Does the whole **staff support** simultaneous administration? To pinpoint individuals who do not support simultaneous administration of vaccination, it may be useful to use a log book in which providers document their reasons for NOT immunizing simultaneously.
- How are **parents approached** when several injections are due? Are they subtly encouraged not to have several vaccines given on the same day? Providers who are not thoroughly convinced of the merits of simultaneous administration may give negative messages subconsciously. It may not be WHAT is said, but HOW it is said that dissuades parents.
- Are **parents prepared** to expect 3 or 4 inoculations at the next visit? It helps to say something like, for example, “We want you to come back in 2 months. That’s Quinn’s 6 month birthday -- right before Labor Day. At that visit, he’ll get the same vaccines as today, plus his last hepatitis B.”

### **% Not Eligible for Vaccine**

This can be found on the flow chart after the 4th branching. It shows the proportion of children who presented, but could not be vaccinated because the minimal interval between doses had not elapsed. If this is more than 5-10%, it may be because there are many patients who start late (see “Late Start Rates” below). However, if the Late Start Rate is NOT also high, good questions include:

- Do providers follow **false contraindications**? Note that a high proportion of children falling behind between DTP1 and DTP2 may indicate use of false contraindications early in the series.
- Is an effective **reminder/ recall system** used? Note that drop-offs later in the series are more likely due to general reminder/recall deficiencies. (See “Drop-Off Rates” below)
- Is the **accelerated schedule** used?

### **% Last Visit >= 12 Months Ago (Lost)**

This can be found on the flow chart after the last branching. A high % of patients who are eligible for vaccine, but who have not been seen in the past year may mean that there are many patients who have moved or gone elsewhere for services without

documentation. Good questions include:

- Are appointment notices, reminder messages, and recall messages simply not arriving?
  - Does the clerical staff update the record of each patient's address and phone number at every visit?
  - Are changes in patient addresses & phone numbers regularly exchanged with other programs (e.g., WIC)?
- If tracking is being done aggressively, is information from the tracking system making it to the patient's record? (e.g., if appointment notices are returned with a "No Forwarding Address" stamp, is that information recorded in the chart?)
- Is there a high Drop-Off Rate, either early or later in the 1st 2 years of life? (See "Drop-Off Rates" below)
- Is there a high % of Late Starts? (See "Late Start Rates" below) Are (managed care) children who are registered as patients at this facility aware that this is their primary care site?

### **Late Start Rates**

This can be found on the first page of the summary report, toward the bottom. It indicates the % of children who start at > 3 months. If this is more than 10%, there are 2 main possibilities:

- a) many infants are not reporting to the practice within 3 months of birth or
- b) many infants who are reporting to the practice within 3 months of birth are not being vaccinated then.

To determine which it is, you can ask the staff their impressions and/or (if documentation is good) randomly select a small % of records to determine if there is a high rate of non-vaccination at the 2 month visit.

If many infants are not reporting by 3 months of age, ask;

- Would the practice's relationship with the local birthing sites and OB practices allow prenatal immunization education for parents emphasizing the importance of a timely first visit?
- Is a postpartum intervention possible? Postpartum interventions range from post cards and phone calls to new moms to hospital/home visits for "high risk" infants.
- Are (managed care) children who are registered as patients at this facility aware that this is their primary care site?

If many infants are not being vaccinated at the early visit, ask:

- Are one or more providers following false contraindications (e.g., prematurity, mild illness)?

## Drop-Off Rates

This can be found on the first page of the summary report, toward the bottom and shows the % of children who begin the DTP series by 6 months of age, but fail to complete it by 12 or 24 months of age. If this is more than 10% at either age, good questions include:

- Are there only **one or two specific ages** at which the problem is most severe? Sometimes specific interventions can be focused at particular problem times during the immunization series (e.g., a reminder birthday card at one year, simultaneous administration of DTP4 with MMR).
- Is an aggressive **reminder/recall system** in place for all ages and all antigens? Reminder notices or calls should come to parents before each immunization due date. Recall messages to families who don't come in for the visit should start immediately following the missed visit and should be repeated at varying times of the day and evening. If a reminder/recall system is in place, is its importance articulated to parents. In other words, is there parent "buy-in" of the system?
- Are there **physical barriers** (e.g., long waiting times, long distances to the site, limited parking) that discourage parents from returning for needed immunizations? Client-flow observations and adjustments in office hours and appointment schedules should be considered.
- Are there **psychological barriers** that discourage parents from returning for needed immunizations? Non-affirming attitudes of office staff and general discourtesy can cause parents to procrastinate (or boycott) subsequent immunization visits. Patient surveys and suggestions boxes are often helpful in identifying barriers. They also encourage staff to be more responsive to patients.
- Are parents personally informed at each visit what additional vaccine doses are needed and when they are **expected to return** to the practice? One-on-one simple, direct personal communication can enforce the importance of remaining on schedule and produce a vivid reminder of what is due and when to return. (For example, a provider might say: "Here are the three points I want you to remember about returning for immunizations...")
- Is there **non-simultaneous administration** of vaccine? (e.g., DTP4 is not given with MMR)

# Common CASA Questions

*If a child got NO vaccines at his last office visit because of an invalid contraindication (e.g., minor illness), will that be counted as a “Missed Opportunity” on a CASA Summary Report?*

No, not if a standard CASA assessment is done because this information would not be collected. The CASA definition of “Missed Opportunity” (also known as Non-Simultaneous Vaccination) is “failure to give all needed vaccines simultaneously on the last *vaccination visit*.” If a child got NO vaccines at his last *office visit* because of an invalid contraindication, CASA would not have a record of that visit at all. The child would NOT have an apparent “Missed Opportunity.”

It is important to note that the CASA assessment can be modified prior to data entry and/or the Missed Opportunity Conversation Report can be used to obtain additional information on missed opportunities.

*A child got only one of the recommended vaccines at her first vaccination visit, but at the MOST RECENT vaccination visit she got all needed vaccines. Will her record be counted as a “Missed Opportunity?”*

Again, not if a standard CASA assessment is done. A “Missed Opportunity” is failure to give all needed vaccines simultaneously on the last vaccination visit. If a child received only one of the recommended vaccines at her first vaccination visit, but all the needed vaccines at the last vaccination visit, CASA would report on the latest visit. The child would NOT have an apparent “Missed Opportunity.”

*If a newborn received Hepatitis B vaccine in the hospital, but did not show up until 4 months of age at his primary care site, will the record be counted as a Late Start?*

Yes. By definition, a Late Start is failure to begin *office-based* immunization by 3 months of age. Of course, if the first set of DTP, polio, or Hib vaccines is given anywhere and then recorded in the office record, that is sufficient.

*What are the age definitions used in CASA?*

Age in months	➡	3	5	7	12	15	16	19	24
# of days	➡	92	153	214	366	458	488	549	732